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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Naimul Karim	)	Examiner: Christopher Koehler
	)	
Serial No.: 10/749,306	)	Group Art Unit: 3726
	)	
Filed: November 13, 2001	)	Docket: 59378US002
	)	(102.0084US01)
Curable Dental Mill Blanks	)	
And Related Materials	)	
	)	

APPELLANT'S REPLY BRIEF ON APPEAL

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This brief is submitted in reply to the Examiner's Answer issued on November 3, 2008.

Applicants respectfully assert that the presently claimed invention is non-obvious in view of the references of record.

The Examiner asserts in the Answer that the Applicants' definition of the term "substantially uncured" in the specification can not reasonably be found to be the exclusive definition of "substantially uncured". Answer at page 8, lines 9 to 11. Applicants respectfully disagree. As defined in the application, "substantially uncured" means that the composition has been cured to an extent of less than 10%, typically less than 5%, and more typically less than 1%; whether by incidental or intentional curing mechanisms." Page 7, lines 7 to 10. Furthermore, it is explicit within the claims that the dental mill blank must be machineable (by way, for example, of step (b) of claim 1) requiring a step of machining a substantially uncured shaped article. By using mill blanks made of substantially uncured, organic composition for

fabrication of dental appliances, the machining tools used for milling the blanks are subject to less wear, which results in tools having a longer service life and in considerably reduced costs. In addition, dental appliances may be fabricated with faster machining times.

The Examiner asserts in the Answer that "Freilich teaches that the dental mill blank is only cured enough to be sufficiently machined and therefore inherently encompasses that the mill blank is uncured, partially cured, or fully cured depending on the material used to comprise the mill blank." Answer at page 5, lines 15 to 17. Applicants respectfully disagree. The only disclosure of machineable blanks in Freilich is for cured or partially cured components. At column 2, line 38 and lines 50 to 53 Freilich teaches "[t]he uncured/slightly cured sections of the hybrid components are very soft and flexible and may be modified by a variety of methods, including forming, shaping, contouring, adjusting, and etching". There is no teaching of machining the uncured / slightly cured sections. In contrast, as stated at column 2, lines 44 to 46, it is the cured or partially cured components that can be machined.

Thus, Freilich explicitly teaches that uncured or slightly cured compositions are very soft and flexible, and unsuitable for machining, while cured and partially cured sections are substantially hard and suitable for curing. The abstract of Freilich states that the "polymeric material is partially or fully cured to the point of sufficient hardness to produce a ready-to-use structural component for use in fabrication of dental appliances. . . ." See also column 1, line 67 to column 2, line 2, which states that the material must be cured to the point of sufficient hardness to provide a component for use in the fabrication of dental appliances.

Assuming the Board finds Applicants' definition of "substantially uncured" to preclude partial curing of Freilich, then the alternative rejection of Freilich in view of Karim is also deficient. The teachings of Karim are directed toward materials having sufficient internal strength to be formed into a desired shape that can be maintained during transportation and storage and with sufficient malleability to be subsequently customized into a second shape and then hardened. Karim discloses and claims compositions having a hardenable self-supporting

structure with sufficient malleability to be subsequently customized into a second shape and then hardened, and methods. In contrast, the pending claims include the step of providing a dental mill blank comprising a substantially uncured, self-supporting, hardenable organic composition; and then machining the mill blank into a substantially uncured shaped article. The objective of the present invention is not to create a malleable composition, but rather to create a machineable composition. Therefore, Applicants believe Karim to be improperly used to reject the pending claims, since Karim essentially teaches away from the present invention.

CONCLUSION

In contrast to the present invention, in which materials are left substantially uncured prior to machining, the prior art teaches that the material for forming dental components is required to be at least partially cured before machining. Thus, the prior art fails to anticipate or make obvious the claimed invention, and therefore the present invention is in a condition for allowance.

Respectfully submitted,

Naimul Karim

By his Representatives,

Date January 5, 2009 By / Daniel M. Pauly /

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